

STATE OF NEW HAMPSHIRE
INTER-DEPARTMENT COMMUNICATION

DATE: November 16, 2018

FROM: *SL* Sarah Large
Wetlands Program Analyst

AT (OFFICE): Department of
Transportation

SUBJECT Dredge & Fill Application
Lempster, 42274

Bureau of
Environment

TO Gino Infascelli, Public Works Permitting Officer
New Hampshire Wetlands Bureau
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095

Forwarded herewith is the application package and emergency after the fact follow up permit application prepared by NH DOT Bureau of Bridge Maintenance for the subject major impact project. This project is classified as major per Env-Wt 303.02(p). The project is located on NH Route 10 in the Town of Lempster, NH. The work completed under the emergency authorization (2018-02426) consisted of installing a 2' wide concrete toewall along the north abutment and placing riprap along the NE and NW banks as well as within the channel along the toewall. The Department is proposing to do more work along the south abutment. The proposed work consists of placing riprap for scour protection along the SE and SW banks as well as in the channel along the south abutment. Rather than submit two permit applications (one for the emergency follow up work and one for the additional stabilization/scour protection work) this application package is intended to cover both.

This project was not reviewed at the Natural Resource Agency Coordination Meeting. The initial phase of work was completed in response to an emergency.

Coordination regarding mitigation is ongoing. The Department is proposing no mitigation at this time since the work is intended to stabilize and protect existing infrastructure.

The lead people to contact for this project are Steve Johnson, Administrator, Bureau of Bridge Maintenance (271-3668 or steve.johnson@dot.nh.gov) or Sarah Large, Wetlands Program Analyst, Bureau of Environment (271-3226 or sarah.large@dot.nh.gov).

A payment voucher has been processed for this application (Voucher #548144) in the amount of \$1,284.20.

If and when this application meets with the approval of the Bureau, please send the permit directly to Sarah Large, Wetlands Program Analyst, Bureau of Environment.

SEL:sel
Enclosures
cc:
BOE Original
Town of Lempster (4 copies via certified mail)
David Trubey, NH Division of Historic Resources (Cultural Review Within)
Carol Henderson, NH Fish & Game (via electronic notification)
Maria Tur, US Fish & Wildlife (via electronic notification)
Mark Kern, US Environmental Protection Agency (via electronic notification)
Michael Hicks, US Army Corp of Engineers (via electronic notification)
Kevin Nyhan, BOE (via electronic notification)

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WETLANDS PERMIT APPLICATION

Water Division/ Wetlands Bureau Land Resources Management

Check the status of your application: www.des.nh.gov/onestop



RSA/Rule: [RSA 482-A/ Env-Wt 100-900](#)

Administrative Use Only	Administrative Use Only	Administrative Use Only	File No.
			Check No.
			Amount
			Initials

1. REVIEW TIME: Indicate your Review Time below. To determine review time, refer to [Guidance Document A](#) for instructions.

☒ Standard Review (Minimum, Minor or Major Impact)

☐ Expedited Review (Minimum Impact only)

2. MITIGATION REQUIREMENT:

If mitigation is required a Mitigation-Pre Application meeting must occur prior to submitting this Wetlands Permit Application. To determine if Mitigation is Required, please refer to the [Determine if Mitigation is Required Frequently Asked Question](#).

Mitigation Pre-Application Meeting Date: Month: ___ Day: ___ Year: ____

☒ N/A - Mitigation is not required

3. PROJECT LOCATION:

Separate wetland permit applications must be submitted for each municipality that wetland impacts occur within.

ADDRESS: **NH 10 over Cold Brook**

TOWN/CITY: **Lempster**

TAX MAP: **N/A**

BLOCK: **N/A**

LOT: **N/A**

UNIT: **N/A**

USGS TOPO MAP WATERBODY NAME: **Cold Brook**

☐ NA

STREAM WATERSHED SIZE: **11.37 sq.mi.** ☐ NA

LOCATION COORDINATES (If known): **43°15'33.9", 72°9'43.6"**

☒ Latitude/Longitude ☐ UTM

4. PROJECT DESCRIPTION:

Provide a brief description of the project outlining the scope of work. Attach additional sheets as needed to provide a detailed explanation of your project. DO NOT reply "See Attached" in the space provided below.

Emergency & additional rehabilitation of the existing 18' span x 29' long concrete slab bridge (122/167) that carries NH 10 over Cold Brook. Work along the north abutment and banks was done under an Emergency Authorization (2018-02426). The work consisted of installing a 2' concrete toewall as well as placing riprap along the the NW & NE banks and channel to stabilize the stream. Additional riprap stabilization work is needed along the south abutment.

5. SHORELINE FRONTAGE:

☒ NA This does not have shoreline frontage.

SHORELINE FRONTAGE:

Shoreline frontage is calculated by determining the average of the distances of the actual natural navigable shoreline frontage and a straight line drawn between the property lines, both of which are measured at the normal high water line.

6. RELATED NHDES LAND RESOURCES MANAGEMENT PERMIT APPLICATIONS ASSOCIATED WITH THIS PROJECT:

Please indicate if any of the following permit applications are required and, if required, the status of the application.

To determine if other Land Resources Management Permits are required, refer to the [Land Resources Management Web Page](#).

Permit Type	Permit Required	File Number	Permit Application Status
Alteration of Terrain Permit Per RSA 485-A:17	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED
Individual Sewerage Disposal per RSA 485-A:2	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED
Subdivision Approval Per RSA 485-A	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED
Shoreland Permit Per RSA 483-B	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED

7. NATURAL HERITAGE BUREAU & DESIGNATED RIVERS:

See the Instructions & Required Attachments document for instructions to complete a & b below.

a. Natural Heritage Bureau File ID: **NHB 18 - 3294**

b. ☐ [Designated River](#) the project is in ¼ miles of: _____; and

date a copy of the application was sent to the [Local River Management Advisory Committee](#): Month: ___ Day: ___ Year: ____

☒ N/A

shoreland@des.nh.gov or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

www.des.nh.gov

8. APPLICANT INFORMATION (Desired permit holder)LAST NAME, FIRST NAME, M.I.: **Johnson, Steve, W**TRUST / COMPANY NAME: **NHDOT-Bridge Maintenance**MAILING ADDRESS: **PO Box 483**TOWN/CITY: **Concord**STATE: **NH**ZIP CODE: **03302**EMAIL or FAX: **Steve.Johnson@dot.nh.gov**PHONE: **271-3667**ELECTRONIC COMMUNICATION: By initialing here: SWJ, I hereby authorize NHDES to communicate all matters relative to this application electronically**9. PROPERTY OWNER INFORMATION (If different than applicant)**LAST NAME, FIRST NAME, M.I.: **NH Dept. of Transportation**TRUST / COMPANY NAME: **NH Dept. of Transportation**MAILING ADDRESS: **PO Box 483**TOWN/CITY: **Concord**STATE: **NH**ZIP CODE: **03302**EMAIL or FAX: **Sarah.Large@dot.nh.gov**PHONE: **271-3226**

ELECTRONIC COMMUNICATION: By initialing here _____, I hereby authorize NHDES to communicate all matters relative to this application electronically

10. AUTHORIZED AGENT INFORMATION

LAST NAME, FIRST NAME, M.I.:

COMPANY NAME:

MAILING ADDRESS:

TOWN/CITY:

STATE:

ZIP CODE:

EMAIL or FAX:

PHONE:

ELECTRONIC COMMUNICATION: By initialing here _____, I hereby authorize NHDES to communicate all matters relative to this application electronically

11. PROPERTY OWNER SIGNATURE:

See the Instructions & Required Attachments document for clarification of the below statements

By signing the application, I am certifying that:

1. I authorize the applicant and/or agent indicated on this form to act in my behalf in the processing of this application, and to furnish upon request, supplemental information in support of this permit application.
2. I have reviewed and submitted information & attachments outlined in the Instructions and Required Attachment document.
3. All abutters have been identified in accordance with RSA 482-A:3, I and Env-Wt 100-900.
4. I have read and provided the required information outlined in Env-Wt 302.04 for the applicable project type.
5. I have read and understand Env-Wt 302.03 and have chosen the least impacting alternative.
6. Any structure that I am proposing to repair/replace was either previously permitted by the Wetlands Bureau or would be considered grandfathered per Env-Wt 101.47.
7. I have submitted a Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) to the NH State Historic Preservation Officer (SHPO) at the NH Division of Historical Resources to identify the presence of historical/ archeological resources while coordinating with the lead federal agency for NHPA 106 compliance.
8. I authorize NHDES and the municipal conservation commission to inspect the site of the proposed project.
9. I have reviewed the information being submitted and that to the best of my knowledge the information is true and accurate.
10. I understand that the willful submission of falsified or misrepresented information to the New Hampshire Department of Environmental Services is a criminal act, which may result in legal action.
11. I am aware that the work I am proposing may require additional state, local or federal permits which I am responsible for obtaining.
12. The mailing addresses I have provided are up to date and appropriate for receipt of NHDES correspondence. NHDES will not returned mail.



Property Owner Signature

Steve W. Johnson

Print name legibly

11/8/18

Date

MUNICIPAL SIGNATURES**12. CONSERVATION COMMISSION SIGNATURE**

The signature below certifies that the municipal conservation commission has reviewed this application, and:

1. Waives its right to intervene per RSA 482-A:11;
2. Believes that the application and submitted plans accurately represent the proposed project; and
3. Has no objection to permitting the proposed work.

	Print name legibly	Date
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DIRECTIONS FOR CONSERVATION COMMISSION

1. Expedited review ONLY requires that the conservation commission's signature is obtained in the space above.
2. Expedited review requires the Conservation Commission signature be obtained **prior** to the submittal of the original application to the Town/City Clerk for signature.
3. The Conservation Commission may refuse to sign. If the Conservation Commission does not sign this statement for any reason, the application is not eligible for expedited review and the application will reviewed in the standard review time frame.

13. TOWN / CITY CLERK SIGNATURE

As required by Chapter 482-A:3 (amended 2014), I hereby certify that the applicant has filed four application forms, four detailed plans, and four USGS location maps with the town/city indicated below.

	Print name legibly	Town/City	Date
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DIRECTIONS FOR TOWN/CITY CLERK:

Per RSA 482-A:3, I

1. For applications where "Expedited Review" is checked on page 1, if the Conservation Commission signature is not present, NHDES will accept the permit application, but it will NOT receive the expedited review time.
2. IMMEDIATELY sign the original application form and four copies in the signature space provided above;
3. Return the signed original application form and attachments to the applicant so that the applicant may submit the application form and attachments to NHDES by mail or hand delivery.
4. IMMEDIATELY distribute a copy of the application with one complete set of attachments to each of the following bodies: the municipal Conservation Commission, the local governing body (Board of Selectmen or Town/City Council), and the Planning Board; and
5. Retain one copy of the application form and one complete set of attachments and make them reasonably accessible for public review.

DIRECTIONS FOR APPLICANT:

1. Submit the single, original permit application form bearing the signature of the Town/ City Clerk, additional materials, and the application fee to NHDES by mail or hand delivery.

shoreland@des.nh.gov or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

www.des.nh.gov

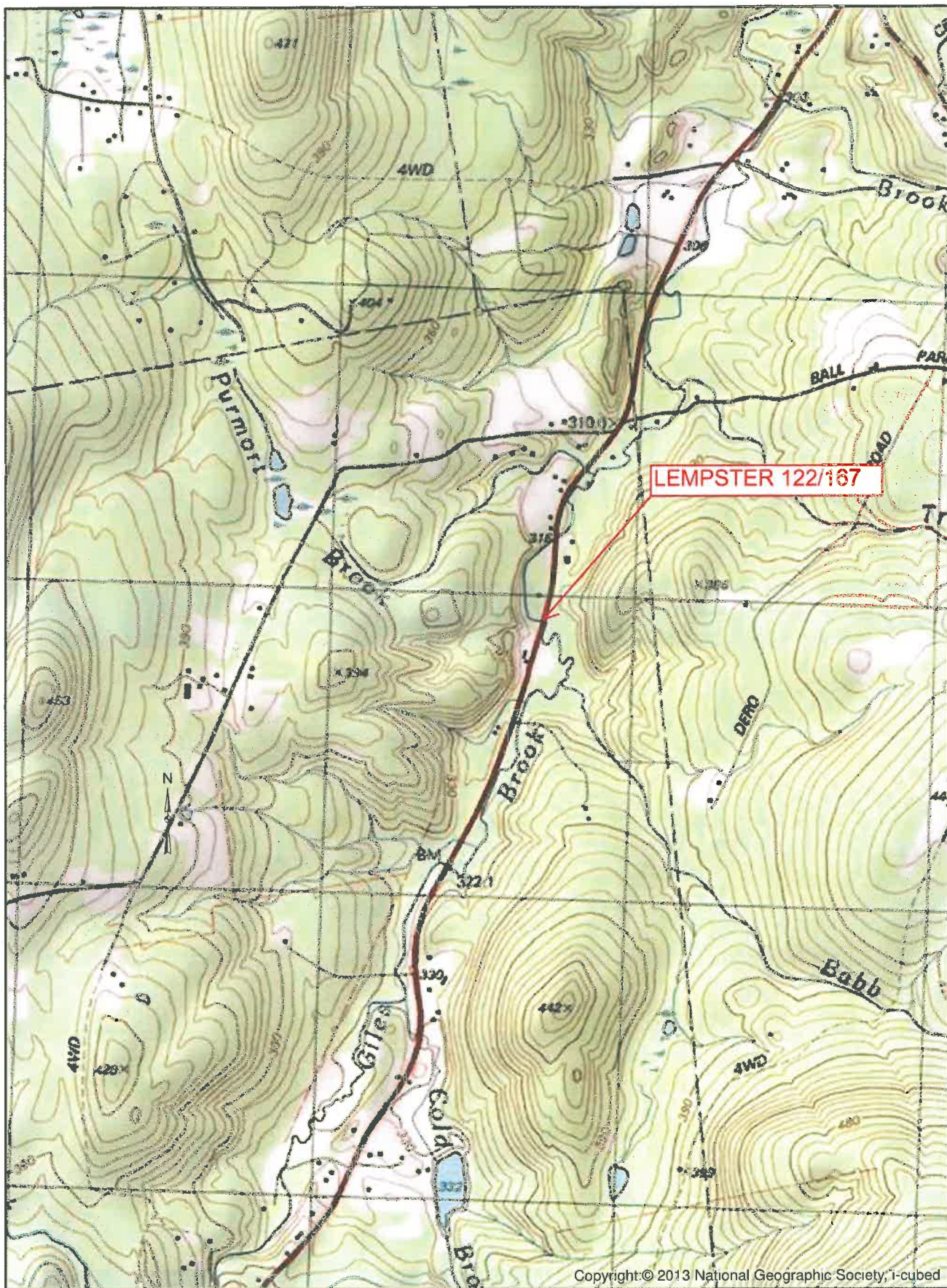
14. IMPACT AREA:

For each jurisdictional area that will be/has been impacted, provide square feet and, if applicable, linear feet of impact

Permanent: impacts that will remain after the project is complete.Temporary: impacts not intended to remain (and will be restored to pre-construction conditions) after the project is complete.

JURISDICTIONAL AREA	PERMANENT Sq. Ft. / Lin. Ft.	TEMPORARY Sq. Ft. / Lin. Ft.
Forested wetland	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Scrub-shrub wetland	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Emergent wetland	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Wet meadow	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Intermittent stream	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Perennial Stream / River	849 / 85 <input type="checkbox"/> ATF	3575 / 156 <input type="checkbox"/> ATF
Lake / Pond	/ <input type="checkbox"/> ATF	/ <input type="checkbox"/> ATF
Bank - Intermittent stream	/ <input type="checkbox"/> ATF	/ <input type="checkbox"/> ATF
Bank - Perennial stream / River	1020 / 153 <input type="checkbox"/> ATF	977 / 105 <input type="checkbox"/> ATF
Bank - Lake / Pond	/ <input type="checkbox"/> ATF	/ <input type="checkbox"/> ATF
Tidal water	/ <input type="checkbox"/> ATF	/ <input type="checkbox"/> ATF
Salt marsh	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Sand dune	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Prime wetland	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Prime wetland buffer	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Undeveloped Tidal Buffer Zone (TBZ)	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Previously-developed upland in TBZ	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Docking - Lake / Pond	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Docking - River	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Docking - Tidal Water	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
TOTAL	1869 / 238	4552 / 261

15. APPLICATION FEE: See the Instructions & Required Attachments document for further instruction☐ Minimum Impact Fee: Flat fee of \$ 200☒ Minor or Major Impact Fee: Calculate using the below table belowPermanent and Temporary (non-docking) 6421 sq. ft. X \$0.20 = \$ 1284.20Temporary (seasonal) docking structure: _____ sq. ft. X \$1.00 = \$Permanent docking structure: _____ sq. ft. X \$2.00 = \$**Projects proposing shoreline structures (including docks) add \$200 = \$****Total = \$ 1284.20****The Application Fee is the above calculated Total or \$200, whichever is greater = \$ 1284.20**



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1:24,000



WETLANDS PERMIT APPLICATION – ATTACHMENT A
MINOR AND MAJOR - 20 QUESTIONS
 Land Resources Management
 Wetlands Bureau



Check the Status of your application: www.des.nh.gov/onestop

RSA/ Rule: RSA 482-A, Env-Wt 100-900

Env-Wt 302.04 Requirements for Application Evaluation - For any major or minor project, the applicant shall demonstrate by plan and example that the following factors have been considered in the project's design in assessing the impact of the proposed project to areas and environments under the department's jurisdiction. Respond with statements demonstrating:

1. The need for the proposed impact.

The existing concrete slab bridge carrying NH 10 over Cold Brook, Lempster (122/167), received significant scour and settlement damage during a rain storm in August. It was and is necessary to impact jurisdictional areas to stabilize the bridge. There was significant settlement along the northern abutment which was address by the installation of a 2' wide concrete toewall as well as riprap along the northern bank and through the channel. The work along the northern side of the bridge was completed under an Emergency Authorization (2018-02426). During the emergency repair further scour and settlement along the south side of the bridge was encountered. The Department would like to go back in and stabilize the south abutment and banks with riprap.

2. That the alternative proposed by the applicant is the one with the least impact to wetlands or surface waters on site.

The alternatives considered are as follows:

Replace the structure with a new structure in compliance with the NH Stream Crossing Guidelines: According to the NH Stream Crossing Guidelines, if a new structure were to be constructed at this location it would require a span of 51'-0". A structure of this size would cost approximately \$800,000. Spending this much money on a structure that could be adequately preserved for approximately \$100,000 would not be a practicable use of resources.

Rehabilitate Existing Structure: This is the preferred alternative because it is the most effective way to repair and provide the necessary structural integrity for the structure. This project has an estimated cost of \$100,000. This is the most cost-effective solution and meets the stream crossing rules to the maximum extent practicable.

shoreland@des.nh.gov or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

www.des.nh.gov

3. The type and classification of the wetlands involved.

R2UB12: Riverine, lower perennial unconsolidated bottom, cobble gravel and sand Bank

4. The relationship of the proposed wetlands to be impacted relative to nearby wetlands and surface waters.

Cold Brook eventually flows into South Branch.

5. The rarity of the wetland, surface water, sand dunes, or tidal buffer zone area.

Cold Brook has not been identified as a rare surface water.

6. The surface area of the wetlands that will be impacted.

4435 sq. ft. Riverine (744 sq. ft. permanent, 3691 sq. ft. temporary)

2117 sq. ft. Bank (1140 sq. ft. permanent, 977 sq. ft. temporary)

7. The impact on plants, fish and wildlife including, but not limited to:
- a. Rare, special concern species;
 - b. State and federally listed threatened and endangered species;
 - c. Species at the extremities of their ranges;
 - d. Migratory fish and wildlife;
 - e. Exemplary natural communities identified by the DRED-NHB; and
 - f. Vernal pools.

a. There were species identified by USF&WS as being present in the area, but was determined that the species will not be impacted.

b. The US Fish and Wildlife Services (USFWS) IPaC tool identified (05E1NE00-2019-SLI-0172) the Northern Long-eared Bat (NLEB), a federally listed threatened species, as a species that may be present within the bounds of the project area. Lempster is however listed as a town with known hibernacula records. Therefore, we reached out to NHB and it was confirmed that the project site is not within 0.25 miles of any known hibernacula. (Coordination provided with 4(d) Rule consultation form). A streamlined 4(d) Rule consultation form has been submitted to the USFWS New England Field Office to notify the USFWS of the project and describe the activities that are accepted from incidental take prohibitions. The streamlined 4(d) Rule consultation form indicated that the project adheres to the conditions of the NLEB 4(d) Rule and the project's Section 7 consultation requirements are satisfied by submission of the form in accordance with the January 5, 2016, Programmatic Biological Opinion (BO) on the final 4(d) rule for the NLEB. The project would not result in any prohibited take of NLEB. (No trees greater than 3" diameter at breast height will be cut within the vicinity of the project area.)

c. There are no species known to be at the extremities of their ranges located in the project area.

d. Migratory fish and wildlife will not be affected by this project.

e. The Department has coordinated with DRED and results of the NHB review revealed there was no record.

f. There were no vernal pools identified and/or delineated in the project area.

8. The impact of the proposed project on public commerce, navigation and recreation.

During construction all lanes of traffic will be maintained at all times. Cold Brook is a non-navigable water which makes it non-conductive to boaters. There are no recreational areas that have been identified in this area except for the possibility for fishing. During construction, fishing activities from the banks of the brook will need to occur outside of the construction work zone. When construction is completed the project as proposed will be a benefit to the public commerce.

9. The extent to which a project interferes with the aesthetic interests of the general public. For example, where an applicant proposes the construction of a retaining wall on the bank of a lake, the applicant shall be required to indicate the type of material to be used and the effect of the construction of the wall on the view of other users of the lake.

The project will not significantly interfere with the aesthetic interests of the general public. The proposed improvements will most likely go unnoticed as the work will primarily be performed w/in the existing structure and is down slop of the roadway and out of view to the general public.

10. The extent to which a project interferes with or obstructs public rights of passage or access. For example, where the applicant proposes to construct a dock in a narrow channel, the applicant shall be required to document the extent to which the dock would block or interfere with the passage through this area.

The project will not interfere with or obstruct public rights of passage or access. During construction, traffic will be maintained at all times.

11. The impact upon abutting owners pursuant to RSA 482-A:11, II. For example, if an applicant is proposing to rip-rap a stream, the applicant shall be required to document the effect of such work on upstream and downstream abutting properties.

The project is expected to have a positive impact on abutting properties. The rehabilitated structure will better serve the abutting properties if they need to travel on the road.

The project as proposed includes the installation for riprap at the inlet and outlet of the structure and will not alter the chance of flooding on the abutting properties.

12. The benefit of a project to the health, safety, and well being of the general public.

The project provides a safer, longer lasting structure and roadway. If the structure is not rehabilitated, the bridge will eventually be load posted or closed. Keeping the roadway open benefits commerce, trade, emergency access, etc., for the general public.

13. The impact of a proposed project on quantity or quality of surface and groundwater. For example, where an applicant proposes to fill wetlands the applicant shall be required to document the impact of the proposed fill on the amount of drainage entering the site versus the amount of drainage exiting the site and the difference in the quality of water entering and exiting the site.

Stormwater currently runs off the road, and over natural vegetation along the roadway and embankments. Upon completion of the project, stormwater will continue to drain in the same manner. This will have no adverse effects on the quality or quantity of surface and groundwater. Best Management Practices will be used to prevent any adverse effect to water quality during construction.

14. The potential of a proposed project to cause or increase flooding, erosion, or sedimentation.

Flooding: Placing a concrete toewall and riprap will not have any effect on the crossing's ability to pass the 100 year storm event.

Erosion: Placing the toewall and riprap is intended to prevent erosion.

Sedimentation: The proposed work will not increase sedimentation at the crossing.

15. The extent to which a project that is located in surface waters reflects or redirects current or wave energy which might cause damage or hazards.

Surface waters will not be reflected or redirected as a result of this project. Cold Brook does not have enough surface water for wave energy to be an issue.

16. The cumulative impact that would result if all parties owning or abutting a portion of the affected wetland or wetland complex were also permitted alterations to the wetland proportional to the extent of their property rights. For example, an applicant who owns only a portion of a wetland shall document the applicant's percentage of ownership of that wetland and the percentage of that ownership that would be impacted.

The work consists of the repair of an existing bridge structure. There are no similar structures in the vicinity owned by other parties that would require repair.

17. The impact of the proposed project on the values and functions of the total wetland or wetland complex.

The project has minimized overall impacts to the river and surrounding wetlands and will not impact the values and functions of Cold Brook. Cold Brook will continue to transport flow from higher elevation to lower elevation.

18. The impact upon the value of the sites included in the latest published edition of the National Register of Natural Landmarks, or sites eligible for such publication.

The project is not located in or near any Natural Landmarks listed on the national register.

19. The impact upon the value of areas named in acts of Congress or presidential proclamations as national rivers, national wilderness areas, national lakeshores, and such areas as may be established under federal, state, or municipal laws for similar and related purposes such as estuarine and marine sanctuaries.

The proposed project is not within any area named in an act of congress or presidential proclamation.

20. The degree to which a project redirects water from one watershed to another.

The project as proposed will not redirect water from one watershed to another.

Additional comments

Mitigation Narrative

The toewall installation along the north abutment and placement of riprap along each of the banks and within the channel along the bridge abutments was and is needed due to the significant scour and undermining occurring at the bridge. The purpose and need for this work was to protect the existing infrastructure from further deterioration. Immediate action was needed along the north quadrants of the bridge due to the severity of the undermining. The work in that area was completed under an Emergency Authorization (2018-02426). The proposed installation of riprap along the south banks and southern abutment is proposed new work. Per Env-wt 302.03(c)(2)c stabilization to protect existing infrastructure such as highways, bridges, dams, or buildings does not require compensatory mitigation, therefore, the Department is proposing no mitigation.

Large, Sarah

From: Large, Sarah
Sent: Thursday, November 08, 2018 1:18 PM
To: Sommer, Lori
Cc: Infascelli, Gino
Subject: Lempster, 42274 Emergency Follow up Permit Application & Mitigation
Attachments: Mitigation Narrative & Photos.docx; 20181108130920.pdf

Good afternoon Lori,

Bridge Maintenance has been diligently working away at completing a follow up wetlands permit application for scour protection work they completed in Lempster, NH along NH route 10 over Cold Brook under an emergency authorization (2018-02426). The work entailed installing a concrete toewall along the bridge's north abutment and placing riprap along the NW & NE banks and along the toewall to protect and stabilize the infrastructure. After completing the work permitted under the authorization Bridge Maintenance notified me that they would like to go back in and place riprap along the SW & SE banks and along the wings and south abutment to protect and stabilize the rest of the structure.

Rather than submit two permit applications (one for the emergency follow up work along the north side of the bridge and one for the additional stabilization/scour protection work along the south side of the bridge) I advised them to combine the follow up with the submission for a permit for the additional impacts. We are a bit past due on the follow up application submission due date, so I am hopeful that we could coordinate about mitigation via email and/or phone call.

The Department feels that the work falls under Env-wt 302.03(c)(2)c- stabilization to protect existing infrastructure and are hopeful that no mitigation would be required for the work. It is similar to several other bridge scour protection jobs we have submitted in the past that have not required mitigation for the impacts, but I wanted to still reach out and touch base with you.

What are your thoughts?

I have attached a draft mitigation narrative document that includes photos of the site. I have also included an electronic copy of the impact plans. Sheet one shows the impacts associated with the work performed under the emergency authorization. The second sheet shows both the work done under the authorization and the additional work we hope to get permitted.

Thank you for your review and consideration. Please let me know if you have any questions, concerns, or would like to talk anything through.

We are almost done with pulling the application together and I hope to submit it next week.

Best wishes,

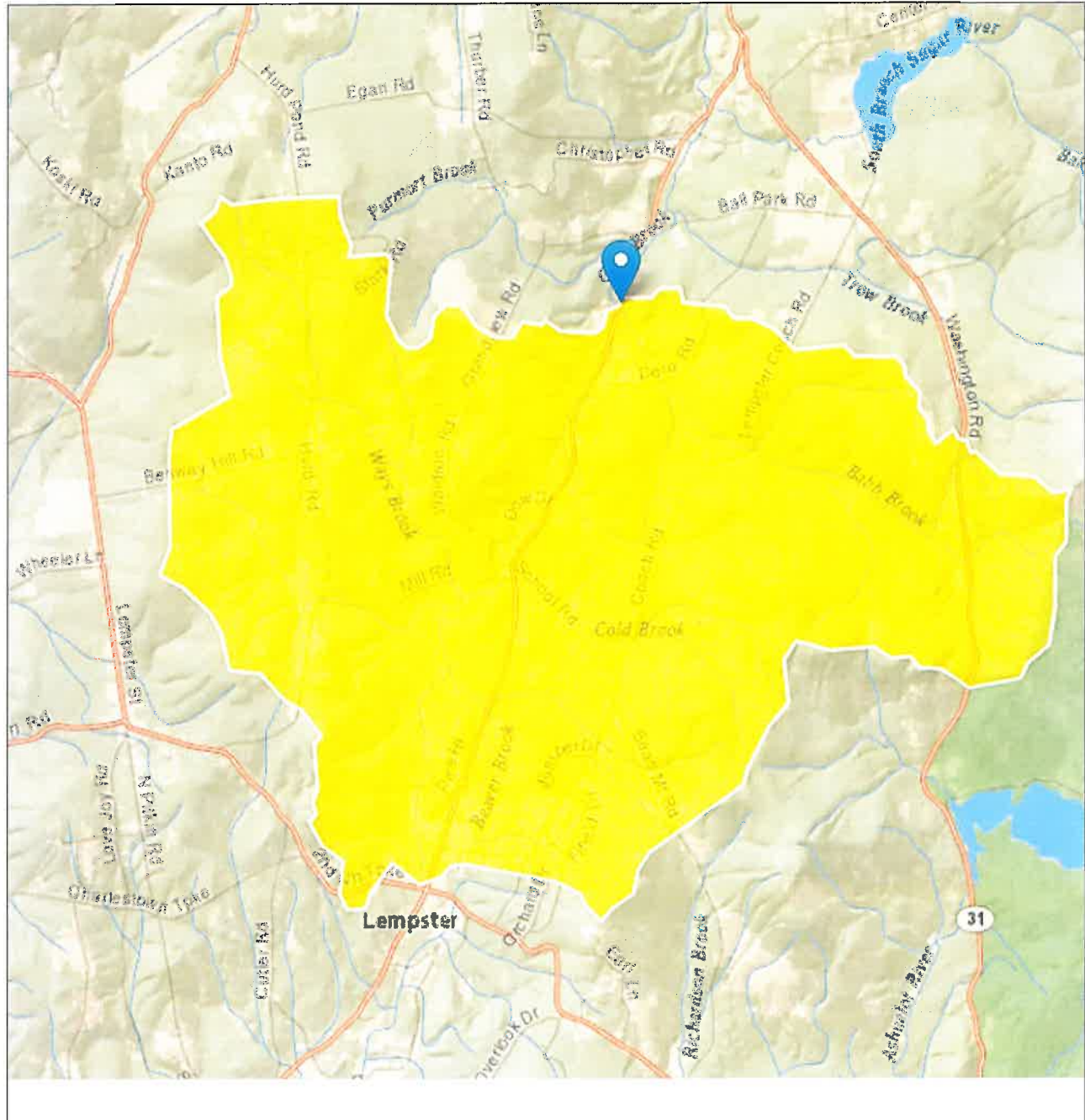
Sarah
Wetlands Program Analyst
NH Department of Transportation
Bureau of Environment

Hydraulic Data

Drainage Area – 11.37 square miles

Flow – Q 100 = 1390 cfs

The proposed structure will pass the 100 year flood.



Watershed Boundaries Map

**NH Department of Transportation
Bureau of Bridge Maintenance
Project, # 42274
Env-Wt 904.09 Alternative Design
TECHNICAL REPORT**

Env-Wt 904.09(a) - If the applicant believes that installing the structure specified in the applicable rule is not practicable, the applicant may propose an alternative design in accordance with this section.

Please explain why the structure specified in the applicable rule is not practicable (Env-Wt 101.69 defines practicable as *available and capable of being done after taking into consideration costs, existing technology, and logistics in light of overall project purposes.*)

Cold Brook has a drainage area of 11.37 square miles which qualifies this stream as a Tier 3 crossing. The required span based on the NH Stream Crossing Guidelines for a new crossing is 51'-0". A structure of this size would typically cost \$800,000. Spending this much money on a structure that could be adequately preserved for approximately \$100,000 would not be a practicable use of resources.

The proposed alternative meets the specific design criteria for Tier 2 and Tier 3 crossings to the maximum extent practicable, as specified below.

Env-Wt 904.05 Design Criteria for Tier 2 and Tier 3 Stream Crossings – New Tier 2 stream crossings, replacement Tier 2 crossings that do not meet the requirements of Env-Wt 904.07, and new and replacement Tier 3 crossings shall be designed and constructed:

(a) In accordance with the NH Stream Crossing Guidelines.

The NH Stream Crossing Guidelines do not mention maintenance to a structure in a Tier 3 watershed; however, the proposed work has been designed to meet the minimum design criteria outlined in Env-Wt 904.05 (see 2b through 2g) to the maximum extent practicable. The Department has designed the maintenance work to support aquatic organism passage and stream connectivity, but it is impracticable to replace the crossing with a structure that is fully compliant size at this time due to constraints of maintenance work.

(b) With bed forms and streambed characteristics necessary to cause water depths and velocities within the crossing structure at a variety of flows to be comparable to those found in the natural channel upstream and downstream of the stream crossing.

Water depths and velocities within the crossing at a variety of flows will be comparable to existing depths and velocities. These flows are comparable to those found in the natural channel upstream and downstream of the stream crossing.

(c) To provide a vegetated bank on both sides of the watercourse to allow for wildlife passage.

It is not possible to provide vegetated banks on both sides of the watercourse below the roadway since the scope of this maintenance work does not include any reconstruction of the existing structure. Wildlife passage for the purpose for the proposed maintenance will be the same as the existing condition.

(d) To preserve the natural alignment and gradient of the stream channel, so as to accommodate natural flow regimes and the functioning of the natural floodplain.

The natural alignment and gradient of the stream channel will not be altered as a result of this project. The toewalls and the riprap will not increase the potential of flooding. The structure can pass the 100 year storm event and this project will not significantly change the capacity. Surface waters will not be reflected or redirected as a result of this project.

(e) To accommodate the 100-year frequency flood, to ensure that (1) there is no increase in flood stages on abutting properties; and (2) flow and sediment transport characteristics will not be affected in a manner which could adversely affect channel stability.

The toewall and the riprap will not increase the potential of flooding. The structure can pass the 100 year storm event and this project will not significantly change the capacity. The existing crossing has no history of flooding or overtopping of the banks of the stream. The project as proposed will not alter the chance of flooding on abutting properties. Nothing that will inhibit or change sediment transport will be installed in this project.

(f) To simulate a natural stream channel.

The natural stream channel will go largely unaffected due to this project.

(g) So as not to alter sediment transport competence.

Nothing that will be a barrier to sediment transport will be installed in this project.

Env-Wt 904.09(c)(3) – The alternative design must meet the general design criteria specified in Env-Wt 904.01:

Env-Wt 904.01

(a) Not be a barrier to sediment transport;

Nothing that will be a barrier to sediment transport will be installed in this project.

(b) Prevent the restriction of high flows and maintain existing low flows;

The toewall repairs and the riprap will not alter the existing high and low flows.

(c) Not obstruct or otherwise substantially disrupt the movement of aquatic life indigenous to the waterbody beyond the actual duration of construction;

The completed structure will provide the same degree of aquatic passage as the existing structure.

(d) Not cause an increase in the frequency of flooding or overtopping of banks;

The toewall and the riprap will not increase the potential of flooding.

(e) Preserve watercourse connectivity where it currently exists;

Connectivity has been change temporarily due to construction. The main channel is expected to be able to handle the capacity of the entire flow during construction. After the proposed project is complete the connectivity will return to the natural flow.

(f) Restore watercourse connectivity where: (1) Connectivity previously was disrupted as a result of human activity(ies); and (2) Restoration of connectivity will benefit aquatic life upstream or downstream of the crossing, or both;

Connectivity will be maintained throughout the project. There will be water diversion used in this project. After the project is complete the connectivity will return to the natural flow. Aquatic life upstream and downstream will not be affected as a result of this project.

(g) Not cause erosion, aggradation, or scouring upstream or downstream of the crossing; and

The riprap placed at the inlet will prevent erosion and preserve the natural alignment and gradation of the stream. Nothing that will be a barrier to sediment transport will be installed in this project.

(h) Not cause water quality degradation.

The project as proposed will not impact the quantity or quality of surface and/or ground water at this site. Best Management Practices will be used to prevent any adverse effect to water quality during construction.

*****Note: An alternative design for Tier 1 stream crossings must meet the general design criteria (Env-Wt 904.01) only to the *maximum extent practicable*.**



New Hampshire Natural Heritage Bureau

To: Douglas Locker
7 Hazen Drive
Concord, NH 03302

Date: 10/23/2018

From: NH Natural Heritage Bureau

Re: Review by NH Natural Heritage Bureau of request dated 10/23/2018

NHB File ID: NHB18-3294

Applicant: Steve Johnson

Location: Tax Map(s)/Lot(s):
Lempster

Project Description: This project was an emergency to rehabilitate the bridge carrying NH 10 over Cold Brook.

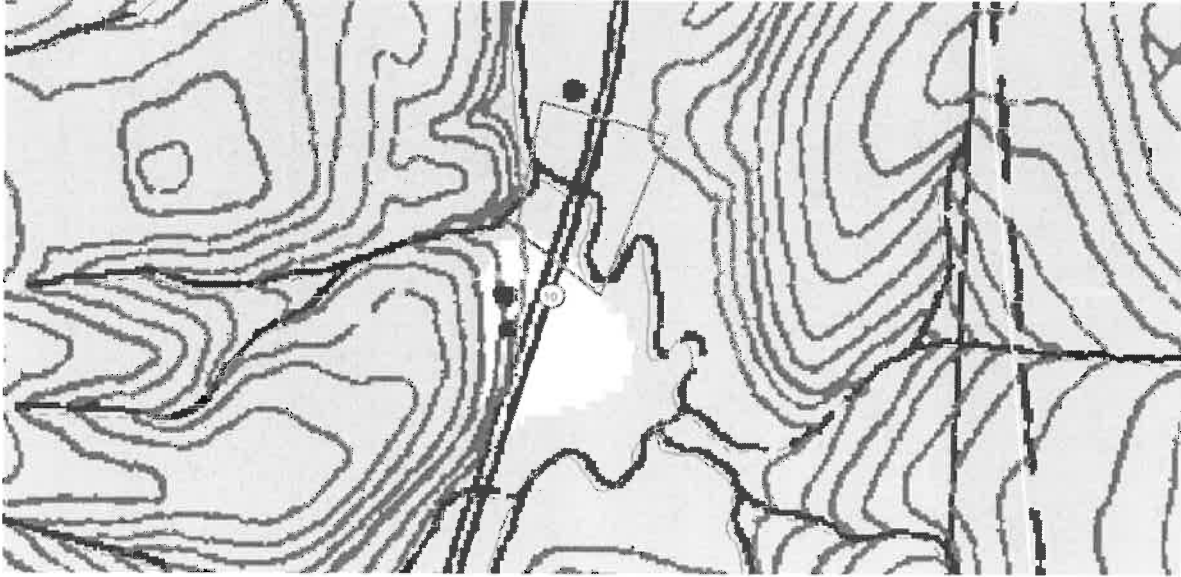
The NH Natural Heritage database has been checked for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government. We currently have no recorded occurrences for sensitive species near this project area.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

This report is valid through 10/22/2019.



MAP OF PROJECT BOUNDARIES FOR NHB FILE ID: NHB18-3294





United States Department of the Interior



FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
<http://www.fws.gov/newengland>

In Reply Refer To:

October 24, 2018

Consultation Code: 05E1NE00-2019-SLI-0172

Event Code: 05E1NE00-2019-E-00377

Project Name: Lempster 122/167

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office

70 Commercial Street, Suite 300

Concord, NH 03301-5094

(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2019-SLI-0172

Event Code: 05E1NE00-2019-E-00377

Project Name: Lempster 122/167

Project Type: BRIDGE CONSTRUCTION / MAINTENANCE

Project Description: Emergency maintenance to repair and stabilize the bridge carrying NH 10 over Cold Brook.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/43.27162014191238N72.15714283608447W>



Counties: Sullivan, NH

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.



Victoria F. Sheehan
Commissioner

THE STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION



William Cass, P.E.
Assistant Commissioner

LETTER OF TRANSMITTAL

Date: 11/5/2018

TO: Susi von Oettingen
Endangered Species Biologist
US Fish and Wildlife Service
70 Commercial Street, Suite 300
Concord, NH 03301

Bureau: Environment
Project: Lempster
Project No.: 42274
Consultation Code: 05E1NE00-2019-SLI-0172

Susi:

WE ARE SENDING YOU

☒ Attached

☐ Under separate cover via
the following items:

COPIES	DATE	DESCRIPTION
1	11/5/2018	NLEB 4(d) Rule Streamlined Consultation Form
1	11/5/2018	USGS Project Location Map
1	11/5/2018	USFWS Official Species List
1	11/5/2018	Coordination with NHB

THESE ARE TRANSMITTED as checked below:

- ☒ For approval
☐ For your use
☐ As requested
☐ For review and comment

- ☐ Approved as submitted
☐ Approved as noted
☐ Returned for corrections
☐ Returned for your use

REMARKS: Enclosed is the NLEB 4(d) Rule Streamlined Consultation Form and backup information for the above referenced project in the town of Lempster, NH and involves no tree removal. The work consisted of emergency stabilization and scour protection along the northern banks and abutment of a concrete slab bridge (122/167) that carries NH 10 over Cold Brook. A concrete toewall was installed along the northern abutment and riprap was placed along the northern banks and channel for scour protection. This work has already been done under an NHDES Emergency Authorization (2018-02426). Additional riprap is needed along the southern banks and abutment. Lempster is listed as a town with known hibernacula. It was confirmed with NHB that the project is not within 0.25 mile of the record. The NHDOT has determined that this project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule. The lead Federal Agency is the US Army Corp of Engineers

Your concurrence with this determination is requested. Please contact me if you have any questions.

Sarah Large

Sarah Large
Wetlands Program Analyst
Bureau of Environment, NHDOT
Room 160 - Tel. (603) 271-6916
E-mail: Sarah.Large@dot.nh.gov

Enc.
Mike Hicks, US ACOE

Northern Long-Eared Bat 4(d) Rule Streamlined Consultation Form

Federal agencies should use this form for the optional streamlined consultation framework for the northern long-eared bat (NLEB). This framework allows federal agencies to rely upon the U.S. Fish and Wildlife Service's (USFWS) January 5, 2016, intra-Service Programmatic Biological Opinion (BO) on the final 4(d) rule for the NLEB for section 7(a)(2) compliance by: (1) notifying the USFWS that an action agency will use the streamlined framework; (2) describing the project with sufficient detail to support the required determination; and (3) enabling the USFWS to track effects and determine if reinitiation of consultation is required per 50 CFR 402.16.

This form is not necessary if an agency determines that a proposed action will have no effect to the NLEB or if the USFWS has concurred in writing with an agency's determination that a proposed action may affect, but is not likely to adversely affect the NLEB (i.e., the standard informal consultation process). Actions that may cause prohibited incidental take require separate formal consultation. Providing this information does not address section 7(a)(2) compliance for any other listed species.

IPaC Official Species List Consultation Code: **05E1NE00-2019-SLI-0172**

Information to Determine 4(d) Rule Compliance:

YES NO

1. Does the project occur wholly outside of the WNS Zone ¹ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Have you contacted the appropriate agency ² to determine if your project is near known hibernacula or maternity roost trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Could the project disturb hibernating NLEBs in a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Could the project alter the entrance or interior environment of a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Does the project remove any trees within 0.25 miles of a known hibernaculum at any time of year?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Would the project cut or destroy known occupied maternity roost trees, or any other trees within a 150-foot radius from the maternity roost tree from June 1 through July 31.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

You are eligible to use this form if you have answered yes to question #1 **or** yes to question #2 **and** no to questions 3, 4, 5 and 6. The remainder of the form will be used by the USFWS to track our assumptions in the BO.

Agency and Applicant³ (Name, Email, Phone No.): Sarah Large (Bureau of Environment); Sarah.Large@dot.nh.gov ; 603-271-6916 & Doug Locker (Bridge Maintenance) Doug.Locker@dot.nh.gov

Project Name: Lempster, #42274

Project Location (include coordinates if known): 43.27177° , -72.15758°

Basic Project Description (provide narrative below or attach additional information):

The work consisted of emergency stabilization and scour protection along the northern banks and abutment of a concrete slab bridge (122/167) that carries NH 10 over Cold Brook. A concrete toewall was installed along the northern abutment and riprap was placed along the banks and channel for scour protection. This work has already been done under an NHDES Emergency Authorization (2018-02426). Additional riprap is needed along the southern banks and abutment. No trees greater than 3" diameter at breast height were or will be removed. Lempster is listed as a town with known NLEB hibernacula. The NHB report came back with a negative result, however we still double checked with NHB and it was confirmed that the project is not within 0.25 mile of the record.

¹ <http://www.fws.gov/midwest/endangered/mammals/nleb/pdf/WNSZone.pdf>

² See <http://www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html>

³ If applicable - only needed for federal actions with applicants (e.g., for a permit, etc.) who are party to the consultation.

General Project Information	YES	NO
Does the project occur within 0.25 miles of a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the project occur within 150 feet of a known maternity roost tree?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the project include forest conversion ⁴ ? (if yes, report acreage below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated total acres of forest conversion		
If known, estimated acres ⁵ of forest conversion from April 1 to October 31		
If known, estimated acres of forest conversion from June 1 to July 31 ⁶		
Does the project include timber harvest? (if yes, report acreage below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated total acres of timber harvest		
If known, estimated acres of timber harvest from April 1 to October 31		
If known, estimated acres of timber harvest from June 1 to July 31		
Does the project include prescribed fire? (if yes, report acreage below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated total acres of prescribed fire		
If known, estimated acres of prescribed fire from April 1 to October 31		
If known, estimated acres of prescribed fire from June 1 to July 31		
Does the project install new wind turbines? (if yes, report capacity in MW below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated wind capacity (MW)		

Agency Determination:

By signing this form, the action agency determines that this project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule.

If the USFWS does not respond within 30 days from submittal of this form, the action agency may presume that its determination is informed by the best available information and that its project responsibilities under 7(a)(2) with respect to the NLEB are fulfilled through the USFWS January 5, 2016, Programmatic BO. The action agency will update this determination annually for multi-year activities.

The action agency understands that the USFWS presumes that all activities are implemented as described herein. The action agency will promptly report any departures from the described activities to the appropriate USFWS Field Office. The action agency will provide the appropriate USFWS Field Office with the results of any surveys conducted for the NLEB. Involved parties will promptly notify the appropriate USFWS Field Office upon finding a dead, injured, or sick NLEB.

Signature: Sarah Large

Date Submitted: 11/2/18

⁴ Any activity that temporarily or permanently removes suitable forested habitat, including, but not limited to, tree removal from development, energy production and transmission, mining, agriculture, etc. (see page 48 of the BO).

⁵ If the project removes less than 10 trees and the acreage is unknown, report the acreage as less than 0.1 acre.

⁶ If the activity includes tree clearing in June and July, also include those acreage in April to October.

Large, Sarah

From: Lamb, Amy
Sent: Friday, November 02, 2018 3:53 PM
To: Large, Sarah
Subject: RE: Lempster Hibernacula

Hi Sarah,

Thanks for double-checking. The project is not within 0.25 miles (or 0.5 miles) of a known hibernaculum.

Amy Lamb
Ecological Information Specialist
(603) 271-2834
amy.lamb@dncr.nh.gov

NH Natural Heritage Bureau
DNCR - Forests & Lands
172 Pembroke Rd
Concord, NH 03301

From: Large, Sarah
Sent: Friday, November 02, 2018 10:16 AM
To: Lamb, Amy
Subject: Lempster Hibernacula

Hi Amy,

Bridge Maintenance has a project in Lempster that consisted of emergency stabilization and scour protection along the northern banks and abutment of a concrete slab bridge (122/167) that carries NH 10 over Cold Brook. A concrete toewall was installed along the northern abutment and riprap was placed along the banks and channel for scour protection. This work has already been done under an NHDES Emergency Authorization (2018-02426). Additional riprap is needed along the southern banks and abutment. No tree clearing will occur with this project.

Lempster is on our list of known towns for NLEB sites. The NHB search that Doug ran did not come back with any hits but I wanted to double check/ confirm that the project area is outside of 0.25 miles of a known hibernaculum or the known record site?

Thanks,

Sarah
Wetlands Program Analyst
NH Department of Transportation
Bureau of Environment

NHDOT Cultural Resources Review

For the purpose of compliance with regulations of the National Historic Preservation Act, the Advisory Council on Historic Preservation's *Procedures for the Protection of Historic Properties* (36 CFR 800), the US Army Corps of Engineers' *Appendix C*, and/or state regulation RSA 227-C:9, *Directive for Cooperation in the Protection of Historic Resources*, the NHDOT Cultural Resources Program has reviewed the proposed project for potential impacts to historic properties.

PROJECT PROPOSAL: The bridge is located on NH10 over Cold Brook (122/167) . The Bureau of Bridge Maintenance received an emergency wetlands permit authorization in August 2018 (2018-02426) to install a concrete toewall along the north abutment of the bridge and place riprap along the NW & NE banks and within the channel because the bridge was severely undermined. After completing the work along the north side of the bridge they decided that the south abutment, banks, and channel need stabilization as well. Therefore we are submitting this application as follow up to the emergency work as well as to get a permit to go back in and add riprap protection to the south abutment, banks, and channel.

Above Ground Review

Known/approximate age of structures:

1948 Concrete slab open span

☒ No Potential to Cause Effect/No Concerns

Applies to Program Comment for Common Post-1945 Concrete and Steel Bridges

☐ Concerns:

Below Ground Review

Recorded Archaeological site: ☐ Yes ☒ No

Nearest Recorded Archaeological Site Name & Number: 27-SU-0039 Cellar Hole

☐ Pre-Contact ☒ Post-Contact

Distance from Project Area:

2.24 miles (3.6 km) southeast of project area

☒ No Potential to Cause Effect/No Concerns

The proposed project location was reviewed to determine if there are known archaeological sites in or immediately adjacent; there are none.

As the proposed actions remain within the disturbed footprint, there are no concerns.

☐ Concerns:

Reviewed by:



11/5/2018

NHDOT Cultural Resources Staff

Date:

New Hampshire Recordation of Bridges that Apply to the Program Comment for Common Post-1945 Concrete & Steel Bridges

Project Name: Lempster

State Number: 42274

FHWA Number: none

Form Completed by: Sheila Charles
Email if not NHDOT staff: Sheila.Charles@dot.nh.gov

Date: 11/5/2018



Town Lempster

NHDOT Bridge No. 122/167

Year Built (rebuilt) 1948

Owner NHDOT
Bridge Maintenance

Road carrying
NH 10

Over feature
Cold Brook

Bridge/culvert Type Reinforced Concrete Slab

Number of Spans One

Length 29'

Width 18"

Abutment style Reinforced Concrete

Pier style Concrete

Rail Type Metal

Rail installation date: Unknown

Designer/Engineer Unknown

Bridge Plaques or None

Reviewed by:

Sheila Charles

Date Reviewed:

11/5/2018

NHDOT Cultural Resources Staff

Approved ☒

Not Approved ☐

Justification:

RPR Number: _____

Reviewed under PA: _____

Created March 27, 2014

Updated September 15, 2014



US Army Corps
of Engineers *
New England District

U.S. Army Corps of Engineers
New Hampshire Programmatic General Permit (PGP)
Appendix B - Corps Secondary Impacts Checklist
(for inland wetland/waterway fill projects in New Hampshire)

1. Attach any explanations to this checklist. Lack of information could delay a Corps permit determination.
2. All references to "work" include all work associated with the project construction and operation. Work includes filling, clearing, flooding, draining, excavation, dozing, stumping, etc.
3. See PGP, GC 5 regarding single and complete projects.
4. Contact the Corps at (978) 318-8832 with any questions.

1. Impaired Waters	Yes	No
1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm to determine if there is an impaired water in the vicinity of your work area.*		X
2. Wetlands	Yes	No
2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?	X	
2.2 Are there proposed impacts to SAS, shellfish beds, special wetlands and vernal pools (see PGP, GC 26 and Appendix A)? Applicants may obtain information from the NH Department of Resources and Economic Development Natural Heritage Bureau (NHB) website, www.nhnaturalheritage.org , specifically the book <u>Natural Community Systems of New Hampshire</u> .		X
2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage?	X	
2.4 Would the project remove part or all of a riparian buffer? (Riparian buffers are lands adjacent to streams where vegetation is strongly influenced by the presence of water. They are often thin lines of vegetation containing native grasses, flowers, shrubs and/or trees that line the stream banks. They are also called vegetated buffer zones.)	X	
2.5 The overall project site is more than 40 acres.		X
2.6 What is the size of the existing impervious surface area?	3462 sq. ft.	
2.7 What is the size of the proposed impervious surface area?	3462 sq. ft.	
2.8 What is the % of the impervious area (new and existing) to the overall project site?	16%	
3. Wildlife	Yes	No
3.1 Has the NHB determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require a NHB determination.)		X
3.2 Would work occur in any area identified as either "Highest Ranked Habitat in N.H." or "Highest Ranked Habitat in Ecological Region"? (These areas are colored magenta and green, respectively, on NH Fish and Game's map, "2010 Highest Ranked Wildlife Habitat by Ecological Condition.") Map information can be found at: <ul style="list-style-type: none"> • PDF: www.wildlife.state.nh.us/Wildlife/Wildlife_Plan/highest_ranking_habitat.htm. • Data Mapper: www.granit.unh.edu. • GIS: www.granit.unh.edu/data/downloadfreedata/category/databycategory.html. 	X	
3.3 Would the project impact more than 20 acres of an undeveloped land block (upland, wetland/waterway) on the entire project site and/or on an adjoining property(s)?		X
3.4 Does the project propose more than a 10-lot residential subdivision, or a commercial or industrial development?		X
3.5 Are stream crossings designed in accordance with the PGP, GC 21?	X	

4. Flooding/Floodplain Values	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?		X
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?		X
5. Historic/Archaeological Resources		
If a minor or major impact project, has a copy of the Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) been sent to the NH Division of Historical Resources as required on Page 5 of the PGP?**		X

*Although this checklist utilizes state information, its submittal to the Corps is a Federal requirement.

** If project is not within Federal jurisdiction, coordination with NH DHR is not required under Federal law.

Internal DOT
Cultural Review

*Program
comment for
Post 1945
Concrete and
Steel Bridges
and Culverts



Upstream Channel



Looking at the Northwest wingwall



Looking Downstream through Structure



Looking Upstream Through Structure



Southeast Wingwall



Looking Upstream at Structure

CONSTRUCTION SEQUENCE

Emergency Permit

1. Install silt curtain to maintain a clean water bypass.
2. Placed rip rap on north bank.
3. Placed concrete toewall.
4. Faced the northern abutment.

Proposed Permit

1. Install silt curtain to maintain a clean water bypass.
2. Riprap will be placed along the south bank.

Note: The Project will utilize BMP's from the Best Management Practices manual during all phases of construction.

Env-Wt 404 Criteria for Shoreline Protection

The rehabilitation of the bridge that carries Rte. 10 over Cold Brook proposes the placement of stone fill within areas under the jurisdiction of the NH Wetlands Bureau and the US Army Corps of Engineers. The stone fill will be located in the channel and along the bank of the proposed structure as shown on the plans.

Pursuant to PART Wt 404 Criteria for Shoreline Stabilization, the following addresses each codified section of the Administrative Rules:

Wt 404.01 Least Intrusive Method

The riverbank stabilization treatment proposed is the least intrusive construction method necessary to minimize the disruption to the existing shorelines. The stone treatment can be reasonably constructed utilizing general highway construction methods.

Wt 404.02 Diversion of Water

Proposed roadway drainage will allow storm water run-off to be diverted so that it will flow over vegetated areas, insofar as possible, prior to entering Cold Brook. This will minimize erosion of the shoreline. A silt boom / silt curtain was used during the emergency repair to maintain a clean water bypass. A silt boom/ silt curtain will be used in the follow up work.

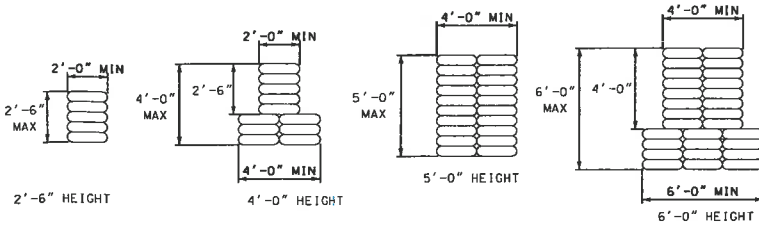
Wt 404.03 Vegetative Stabilization

Natural vegetation will be left undisturbed to the maximum extent possible. The only locations being disturbed are the impacted areas on the plan for construction. All newly developed slopes and disturbed areas will have humus and seed applied for turf establishment, which will help stabilize the project area.

Wt 404.04 Rip-Rap

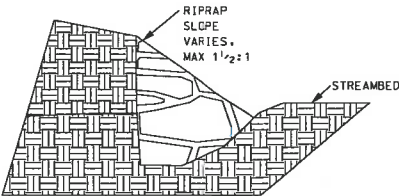
- (a) Stone fill, as proposed, is shown on the attached plans to protect the channel and bank as necessary. Stable embankments are necessary to maintain the structural integrity of the bridge during all flow conditions.
- (b) (1-5) The minimum and maximum stone size, the gradation, cross sections of the stone fill, proposed location, and other details have been provided on the attached plans. Bedding for the stone fill will consist of natural ground excavated to the proposed underside of the stone fill.
- (b) (6) Enclosed are plan sheets to sufficiently indicate the relationship of the project to fixed points of reference, abutting properties, and features of the natural shoreline.
- (b) (7) Stone fill is recommended for the limits shown on the attached plans to protect the banks from erosion during flood flows, from scour during all flows, and slopes greater than 2:1 have difficulty supporting vegetation.
- (c) This project is not located adjacent to a great pond or water body where the state holds fee simple ownership.
- (d) Stone fill is proposed to extend down to and adequately keyed into the channel bottom to prevent possible undermining of the slope.
- (e) The enclosed plan has been stamped by a professional engineer.

RIPRAP GRADATION
D15 < 13"
D50 < 18"
D100 < 30"



COFFERDAM DETAILS
NOT TO SCALE

RRIPRAP	
NEW HAMPSHIRE WETLANDS BUREAU (PERMANENT NON-WETLAND)	
NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	
TEMPORARY IMPACTS	



SECTION A-A
NOT TO SCALE



EMERGENCY PERMIT WETLAND IMPACTS
SCALE: 1" = 20'-0"

Information, see sheet 2 of 4 and 3 of 4
for total impacts.

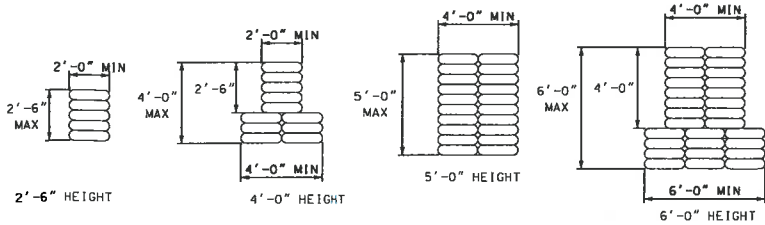


WETLANDS DELINEATED BY SARAH LARGE ON 10/10/2018

STATE OF NEW HAMPSHIRE																										
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE MAINTENANCE																										
TOWN		LEMPSTER		BRIDGE NO.		122/167		STATE PROJECT		42274																
LOCATION										NH 10 OVER COLD BROOK																
WETLAND IMPACTS										BRIDGE SHEET																
REVISIONS AFTER PROPOSAL			BY			DATE			BY			DATE			1		OF		4							
			DESIGNED						CHECKED						FILE NUMBER LEMPSTER 122/167											
			DRAWN			DBL			10/18/18			CHECKED														
			QUANTITIES						CHECKED						TOTAL SHEETS 4											
			ISSUE DATE						FISCAL YEAR			2017							CREW			10			SHEET NO.	
			REV. DATE																							

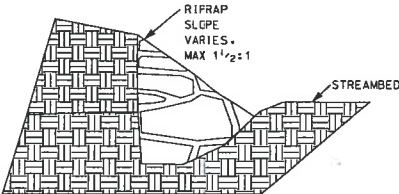
SHEET SCALE
AS NOTED

RIPRAP GRADATION
D15 < 13"
D50 < 18"
D100 < 30"



COFFERDAM DETAILS
NOT TO SCALE

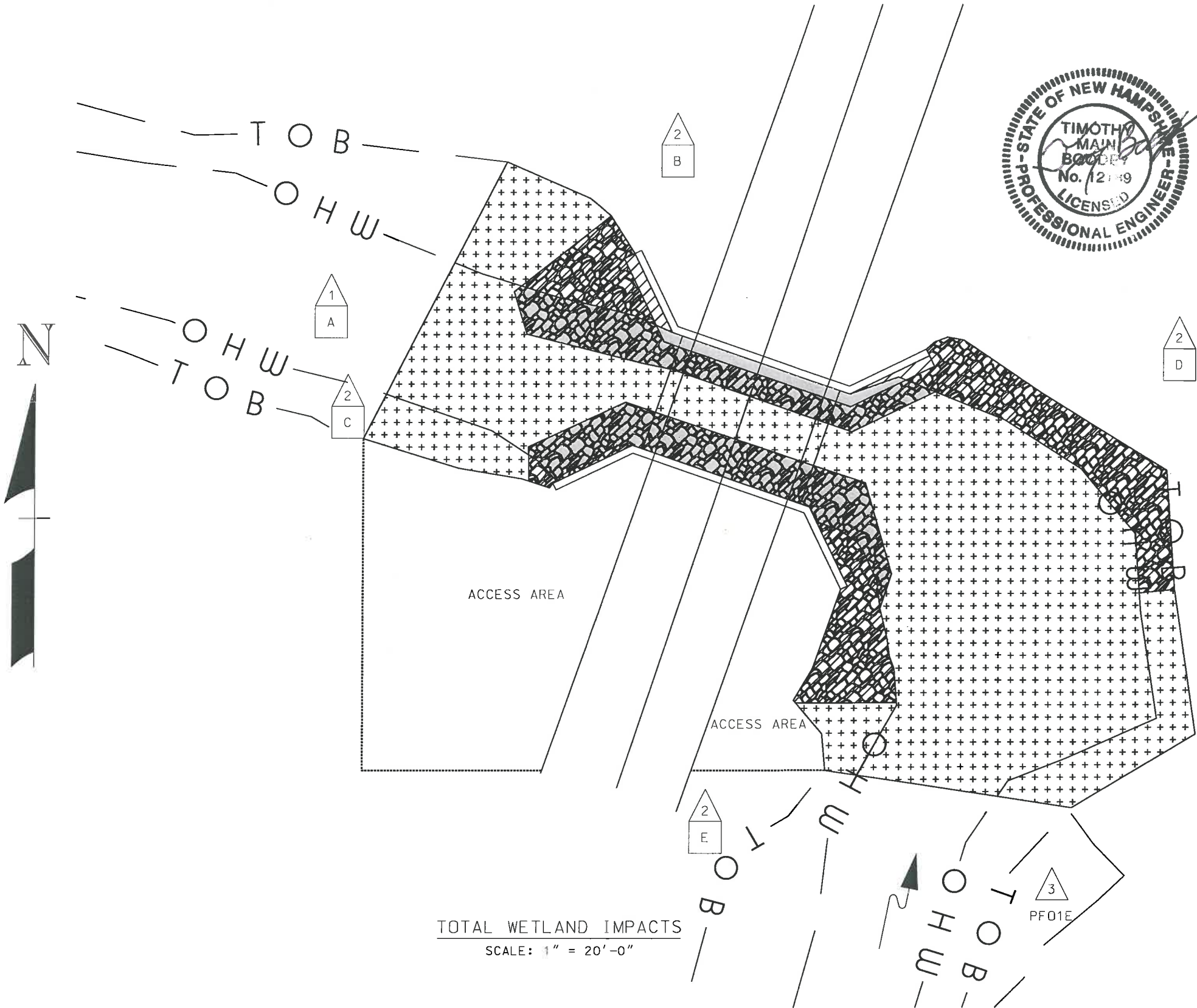
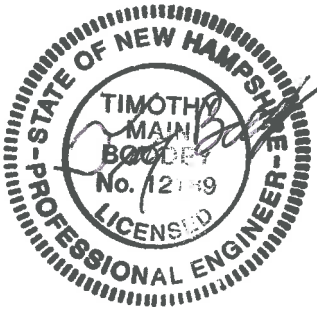
RIPRAP	
NEW HAMPSHIRE WETLANDS BUREAU (PERMANENT NON-WETLAND)	
NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	
TEMPORARY IMPACTS	



SECTION A-A
NOT TO SCALE

WETLANDS DELINEATED BY SARAH LARGE ON 10/10/2018

STATE OF NEW HAMPSHIRE											
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE MAINTENANCE											
TOWN		LEMPSTER		BRIDGE NO.		122/167		STATE PROJECT		42274	
LOCATION		NH 10 OVER COLD BROOK									
WETLAND IMPACTS										BRIDGE SHEET	
REVISIONS AFTER PROPOSAL				BY		DATE		BY		DATE	
				DESIGNED				CHECKED			
				DRAWN		DBL		10/18/18		CHECKED	
				QUANTITIES				CHECKED			
				ISSUE DATE				FISCAL YEAR		CREW	
				REV. DATE				2017		10	
										SHEET NO.	
										2	
										TOTAL SHEETS	
										4	



TOTAL WETLAND IMPACTS
SCALE: 1" = 20'-0"



Lempster 122/167

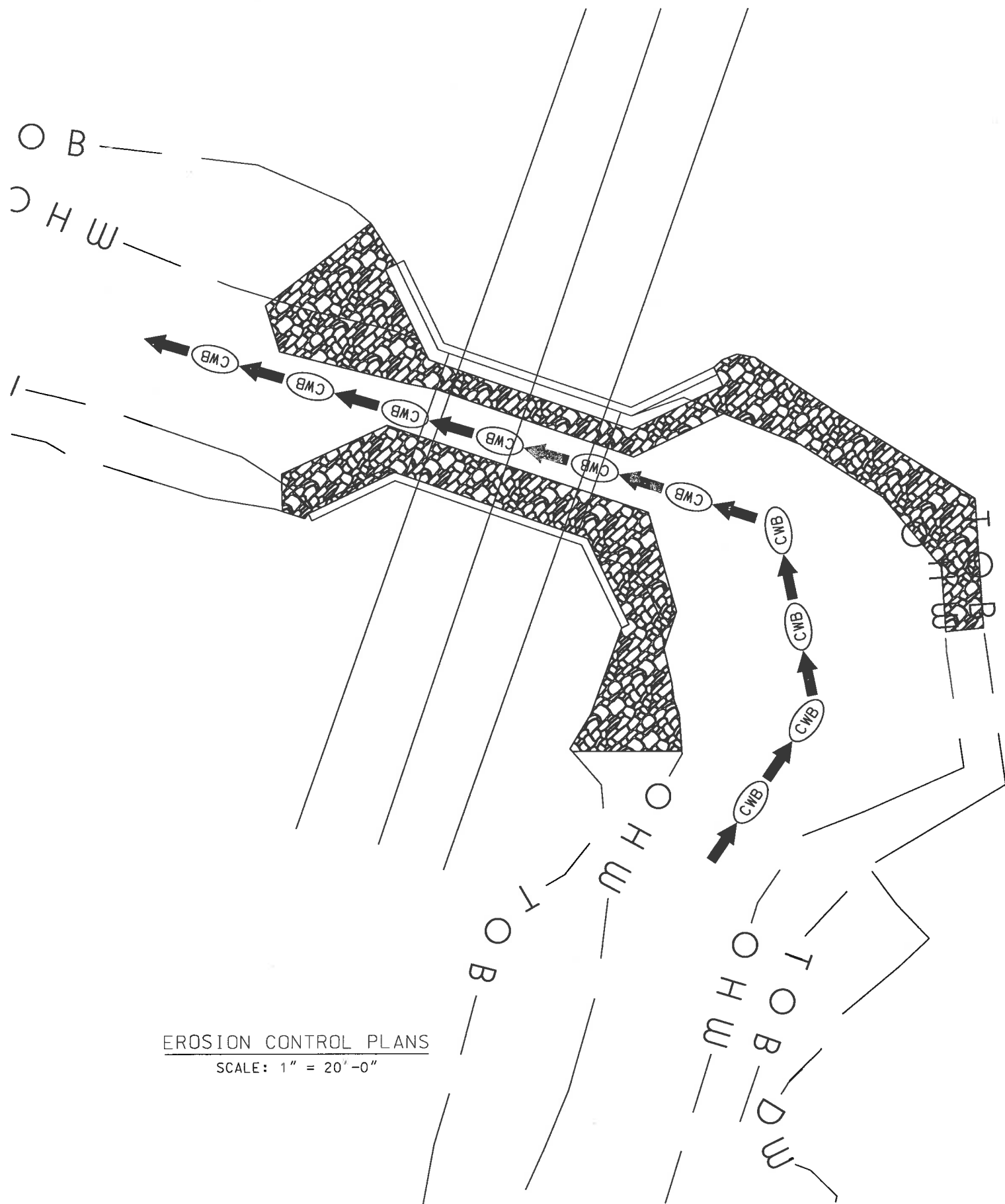
WETLAND IMPACT SUMMARY												
WETLAND NUMBER	WETLAND CLASSIFICATION	LOCATION	AREA IMPACTS						LINEAR STREAM IMPACTS FOR MITIGATION			
			PERMANENT				TEMPORARY		PERMANENT			
			N.H.W.B. (NON WETLAND)		N.H.W.B. & A.C.O.E. (WETLAND)				BANK LEFT	BANK RIGHT	CHANNEL	
			SF	LF	SF	LF	SF	LF	LF	LF	LF	
1	R2UB12	A			849	85	3575	156				
2	BANK	B	213	27			304	12				
2	BANK	C	27	20			205	27				
2	BANK	D	498	69			344	52				
2	BANK	E	282	37			124	14				
			TOTAL	1020	153	849	85	4552	261	0	0	0

PERMANENT IMPACTS:	1869	SF
TEMPORARY IMPACTS:	4552	SF
TOTAL IMPACTS:	6421	SF

SUBTOTALS		PERMANENT				TEMPORARY	
		N.H.W.B. (NON WETLAND)		N.H.W.B. & A.C.O.E. (WETLAND)			
CLASS	DESCRIPTION	SF	LF	SF	LF	SF	LF
R2UB12	RIVERINE	0	0	849	85	3575	156
BANK	BANK	1020	153	0	0	977	105

WETLAND CLASSIFICATION CODES	
R2UB1	RIVERINE, LOWER PERENNIAL, UNCONSOLIDATED BOTTOM, COBBLE GRAVEL
PFQ1E	PALUSTRINE, FORESTED, BROAD-LEAVED DECIDUOUS, SEASONALLY FLOODED/SATURATED
BANK	

STATE OF NEW HAMPSHIRE											
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE MAINTENANCE											
TOWN		LEMPSTER		BRIDGE NO.		122/167		STATE PROJECT		42274	
LOCATION		NH 10 OVER COLD BROOK									
WETLAND KEY AND SUMMARY										BRIDGE SHEET	
REVISIONS AFTER PROPOSAL				BY		DATE		BY		DATE	
				DESIGNED				CHECKED			
				DRAWN		DBL 10/18/18		CHECKED			
				QUANTITIES				CHECKED			
SHEET SCALE				ISSUE DATE				FISCAL YEAR		CREW	
AS NOTED				REV. DATE				2016		14	
										SHEET NO.	
										3	
										TOTAL SHEETS	
										4	



EROSION CONTROL PLANS
SCALE: 1" = 20'-0"

EROSION CONTROL PLAN LEGEND



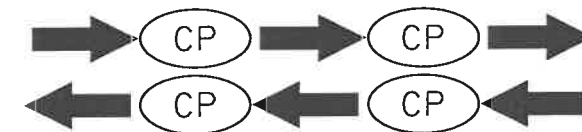
PERIMETER CONTROL

SILT FENCE
EROSION CONTROL MIX BERM
EROSION CONTROL MIX SOX
TURBIDITY CURTAIN
SHEET PILE
COFFER DAM



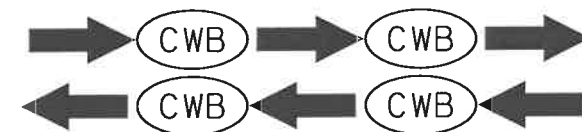
NATURAL BUFFER/PERIMETER CONTROL

SILT FENCE
EROSION CONTROL MIX BERM
EROSION CONTROL MIX SOX
TURBIDITY CURTAIN
SHEET PILE
COFFER DAM



CHANNEL PROTECTION

STONE CHECK DAMS
STRAW WATTLES
CHANNEL MATTING
CLASS D EROSION STONE
CLASS C STONE



CLEAN WATER BYPASS

PUMP THROUGH PIPE
DRAIN THROUGH PIPE OR CHANNEL

STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE MAINTENANCE									
TOWN	LEMPSTER	BRIDGE NO.	122/167	STATE PROJECT	42274				
LOCATION NH 10 OVER COLD BROOK									
EROSION CONTROL PLANS									
REVISIONS AFTER PROPOSAL		DESIGNED	BY	DATE	CHECKED	BY	DATE	BRIDGE SHEET	
		DRAWN	DBL	10/18/18	CHECKED			4 OF 4	
		QUANTITIES			CHECKED			FILE NUMBER	
		ISSUE DATE						BROOKLINE	
		REV. DATE						091/076	
		FISCAL YEAR	2016	CREW	14	SHEET NO.	4	TOTAL SHEETS	
								4	

AS NOTED